Vol. 38, 1980

Biology of the Neonate

Fetal and Neonatal Research

Founded 1959 as 'Biologia Neonatorum' by A. Minkowski
(Formerly 'Etudes Néo-Natales')

Editor-in-Chief:
A. Minkowski, Paris

Editorial Board:
F.C. Battaglia, Denver, Col.
G. Duc, Zurich
J. Girard, Paris
G. Mestyan, Pecs
N. Raiha, Helsinki
J.P. Relier, Paris
L. Stern, Providence, R.I.
R. Zetterstrom, Stockholm

Editorial Advisers:
P. Hahn, Vancouver, B.C.
A. Jost, Paris
P. Kalberg, Göteborg
E. Kerpel-Fronius, Budapest
N. Kretchmer, Bethesda, Md.
J. Lind, Stockholm
T. Oppe, London
A.H. Parmelee, Jr., Los Angeles, Calif.
H.J. Shelley, Oxford
C.A. Smith, Boston, Mass.
J.P. Tizard, Oxford

S. Karger · Basel · München · Paris · London · New York · Sydney

Contents Vol. 38, 1980

No. 1–2

Renal Response to Alterations in Dietary Phosphate in the Young Beagle
Russo, J.C. and Nash, M.A. . . . . .
Serum and Urine Concentrations of Protein, Urea, Sodium, and Potassium during the Immediate Postnatal Period of the Suckling Pig
Parker, R.O. and Aherne, F.X. . . . . .
Ontogeny of Sugar Transport in Fetal Rat Kidney
Lelièvre-Pégorier, M. and Geloso, J.P. . . . . .
Postnatal Development of Mevalonate Phosphorylation in the Chick Brain and Kidney
Linares, A.; Garcia-Martinez, J.; Suarez, M.D., and Garcia-Peregrin, E. . . . . .
Effect of Theophylline on the Riboflavin-Sensitized Photodegradation of Bilirubin *in vitro*
Meisel, P.; Amon, I.; Hüller, H., and Jährig, K. . . . . .
Relationship of 2,3-Diphosphoglycerate and 2,3-Diphosphoglycerate Mutase in Various Mammals
Chemtob, S.; Gibb, W., and Bard, H. . . . . .
Urinary Loss of Oxypurines in Hypoxic Premature Neonates
Jensen, M.H.; Brinklφv, M.M., and Lillquist, K. . . . . .
Continuous Measurement of Scalp Tissue Oxygen Tension and Carotid Arterial Oxygen Tension in the Fetal Lamb
Aarnoudse, J.G.; Oeseburg, B.; Kwant, G.; Huisjes, H.J., and Zijlstra, W.G. . . . . .
Effects of Apomorphine on Ventilation in the Neonatal Rat
Farber, J.P. and Phillips, M.I. . . . . .
Zinc Concentration in Gravida's Serum and Amniotic Fluid during Normal Pregnancy
Brandes, J.M.; Lightman, A.; Itskovitz, J., and Zinder, O. . . . . .
Glycosylation and Acetylation of Hemoglobin in Infants of Normal and Diabetic Mothers
Schwartz, H.C.; Widness, J.; Thompson, D.; Tsuboi, K.K.; Oh, W., and Schwartz, R. . . . . .
Influence of Indomethacin on Renal Function in Conscious Newborn Lambs
Winther, J.B.; Hoskins, E.; Printz, M.P.; Mendoza, S.A.; Kirkpatrick, S.E., and Friedman, W.F. . . .
Effect of Inhaling 100% O_2 on Ventilation and Acid-Base Balance in Cerebrospinal Fluid of Neonates
Davi, M.; Sankaran, K., and Rigatto, H. . . . . .
Carnitine Acetyltransferase in Developing Mammals
Seccombe, D.W. and Hahn, P. . . . . .
Lung Compliance in Newborns with Patent Ductus Arteriosus before and after Surgical Ligation
Gerhardt, T. and Bancalari, E. . . . . .
Bilirubin Dynamics in the Gunn Rat. Dose Response of Intermittent and Continuous Phototherapy
Vogl, T.P.; Cheskin, H.S.; Blumenfeld, T.A., and Sugai, G.K. . . . . .

No. 3–4

An Estimate of the Caloric Requirements of the Human Fetus
Sparks, J.W.; Girard, J.R., and Battaglia, F.C. 113
Histological Structure of the Thyroid Gland in the Neonatal Pig
Parker, R.O.; Williams, P.E.V.; Aherne, F.X., and Young, B.A. 120
Circulating Plasma Protein Concentrations in the Fetal and Neonatal Sheep
Nathanielsz, P.W.; Lowe, K.C.; Beck, N.F.G.; McNaughton, D.C.; Jansen, C.A.M.; Thomas, A.L., and Stanley, C.J. 126
Serum Enzymes and Bilirubin in Neonates after Normal or Complicated Delivery
Parmar, C.R. and Sareen, K.N. 134
In vitro Response of Glycerol Metabolism to Insulin and Adrenaline in Adipose Tissue from Fed and Fasted Rats during Pregnancy
Chaves, J.M. and Herrera, E. 139
Ontogenic Studies of Intestinal Lactate Dehydrogenase Isozymes in the Hamster
Walden, R. and Schiller, C.M. 146
Glycogen Content in Subcutaneous Adipose Tissue of Newborns of Different Birth Weights in the First Week of Life
Přibylová, H.; Rážová, M., and Vondráček, J. 154
Lipid Peroxidation and Antioxidants in the Rat Lung during Development
Yoshioka, T.; Shimada, T., and Sekiba, K. 161
The Effect of Exogenous Steroids and Steroid Inhibitors on IgG Transmission in Young Rats
Morris, B. and Morris, R. 169
The Effect of Phototherapy on Intestinal Mucosal Enzyme Activity in the Gunn Rat
Dinari, G.; Cohen, M.I.; McNamara, H., and Daum, F. 179
Body and Organ Development of Young Rats Maternally Exposed to Methadone
McLaughlin, P.J. and Zagon, I.S. 185
Circadian Rhythms in Neonatal Rat Parotid Gland Acinar Cell and Ileal Crypt Cell Mitosis
Klein, R.M. and Whitney, S.L. 197
Growth and Development of the Neonatal Rat: Particular Vulnerability of Males to Disadvantageous Conditions during Rearing
Crutchfield, F.L. and Dratman, M.B. 203
Vitamin E Serum Levels in Newborn Infants Undergoing Phototherapy
Hadjigeorgiou, E.; Tzortzatou, F.; Malamitsi-Puchner, A.; Papadatos, J.; Papadakis, D., and Nicolopoulos, D. 210
Cortisone and Cortisol in Maternal and Fetal Blood and in Amniotic Fluid during the Final Ten Days of Gestation in the Rabbit
Barr, H.A.; Lugg, M.A., and Nicholas, T.E. 214

No. 5–6

Lung Fluid Balance in Hypoxic, Awake Newborn Lambs and Mature Sheep
Bland, R.D.; Bressack, M.A.; Haberkern, C.M., and Hansen, T.N. 221
Effect of α-Adrenergic Agonist and Antagonist Infusion on the Umbilical and Uterine Circulations of Pregnant Sheep
Oakes, G.K.; Ehrenkranz, R.A.; Walker, A.M.; McLaughlin, M.K.; Brennan, S.C., and Chez, R.A. . 229
Effect of Birth and Surfactant Treatment on Phospholipid Synthesis in the Premature Rabbit
Stewart-DeHaan, P.J.; LeRoy Metcalfe, I.; Harding, P.G.R.; Enhörning, G., and Possmayer, F. . . . 238

Pancreatic Insulin-, Glucagon-, and Somatostatin-Positive Islet Cell Populations during the Perinatal Development of the Rat. I. Morphometric Quantitation
McEvoy, R.C. and Madson, K.L. 24
Pancreatic Insulin-, Glucagon-, and Somatostatin-Positive Islet Cell Populations during the Perinatal Development of the Rat. II. Changes in Hormone Content and Concentration
McEvoy, R.C. and Madson, K.L. 25
Effects of Dexamethasone on Fetal Mouse Development
Tye, L.M. and Burton, A.F. 26
Glycogen Deposition in Fetal Mouse Tissues and the Effect of Dexamethasone
Tye, L.M. and Burton, A.F. 26
Effect of Positive End-Expiratory Pressure on Dynamic Respiratory Compliance in Neonates
Philips, J.B., III; Beale, E.F.; Howard, J.E.; Jaeger, M.J., and Eitzman, D.V. 27
Cerebral Metabolism during Hypoglycemia and Asphyxia in Newborn Dogs
Vannucci, R.C.; Nardis, E.E., and Vannucci, S.J. 27
Effect of Prematurity on the Developmental Progression from Fetal to Adult Thymidine Kinase in Human Serum
Sadava, D.; Elliott, K., and Bernard, B. 28
Effects of Perinatal Exposure to Benzo(a)pyrene on the Aryl Hydrocarbon Hydroxylase System of Adult Rat Liver
Herd, J.E. and Greene, F.E. 29
Lysosomal Enzyme Activities of Human Fetal Organs during Development
Shin-Buehring, Y.S.; Dallinger, M.; Osang, M.; Rahm, P., and Schaub, J. 3
Intestinal Absorption of Proteins by the Neonatal Piglet Fed on Sow's Colostrum with either Natural or Experimentally Eliminated Trypsin-Inhibiting Activity
Carlsson, L.C.T.; Weström, B.R., and Karlsson, B.W. 3
Fetal Metabolic Response to Phloridzin-Induced Hypoglycemia in Pregnant Rats
Freund, N.; Kervran, A.; Assan, R.; Geloso, J.-P., and Girard, J. 3

Author Index 3
Subject Index 3

S. Karger AG,
P.O. Box, CH–4009 Basel (Switzerland)
Printed in Switzerland by Thür AG Offsetdruck, Pratteln

All rights reserved.
No part of this publication may be translated other languages, reproduced or utilized in any forr by any means, electronic or mechanical, inclu photocopying, recording, microcopying, or by an formation storage and retrieval system, without mission in writing from the publisher.